



CHAPEL HILL TRANSIT: STRATEGIC AND FINANCIAL PLAN

State of the System Report

DRAFT

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EXECUTIVE SUMMARY



NS SOUTHERN VILLAGE



Chapel Hill
Transit

KNEELING

RAMP

FIRE EXTINGUISHER
HERE

EXECUTIVE SUMMARY

The purpose of the Strategic and Financial Sustainability Plan is twofold:

- Address CHT's short-term challenges associated with staffing and capital investments, and
- Articulate an agency vision for service development over the long term and craft a strategy that aligns longer-term system goals with a sustainable financial plan.

The State of the System Report frames the issues, opportunities, and challenges facing CHT and serves as a starting point for future recommendations. The development of this report looked at a number of factors, including CHT's current operating environment, a market assessment, and plans for growth in the region.

THE CHALLENGE

CHT has experienced significant growth over the past 10 years, which has been a very positive change for the community. However, as CHT doubled its efforts and productivity, many aspects of the organization—including staffing and capital infrastructure—have not kept pace. The short-term challenge assigned to the Strategic and Financial Sustainability Plan is to develop a strategy that will help CHT ramp up its staffing and capital resources so that the agency is well-positioned to meet its current obligations and fulfill its role in the community.

Once the baseline challenges are addressed, the Strategic and Financial Sustainability Plan will focus on working with CHT staff, funders, and the broader community to articulate a vision for how transit can support community goals for a viable, multimodal future. Continued, sustainable, and innovative funding solutions will also be an essential part of this strategy. The State of the System Report is only the beginning of the conversation about the challenges and opportunities facing CHT. Framing issues related to regional transit investment and funding, discussed in Chapter 2 and Chapter 3, are essential to developing solutions to some very real and impending challenges.

Trends in Ridership, Service Hours, and Productivity

CHT ridership has grown significantly over the past 10 years. Future analysis conducted as part of the Strategic and Financial Sustainability Plan will make recommendations about service levels with the goal of enhancing the sustainability of CHT's services.

Organizational Structure

As CHT doubled the amount of service it provided, many parts of the organization and organizational structure did not keep pace. Inadequate staffing levels are due to a number of factors, including limited funding, working within the constraints of being a department in the Town of Chapel Hill, and failing to update practices that worked for a smaller system but are unsuitable for CHT's current size. An organizational analysis conducted as part of the Strategic and Financial Sustainability Plan will provide recommendations about staffing levels and organizational structure at CHT.

Capital Planning: Replacing Old Vehicles

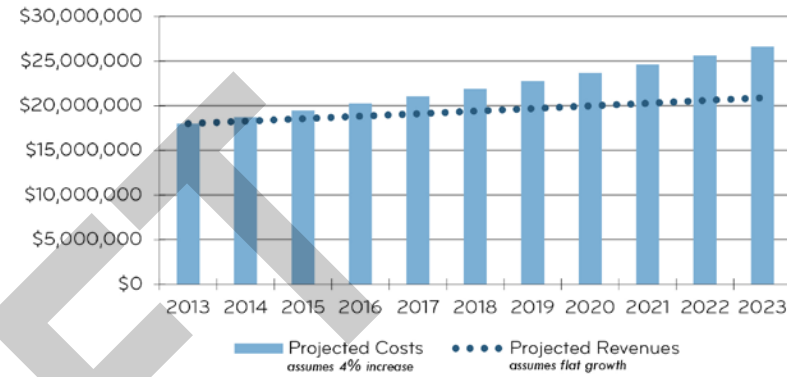
Ongoing funding challenges at the operating level combined with changes in federal funding programs have led to an under-investment in capital infrastructure. By the end of 2013, all 19 demand response vehicles and 42 of 99 fixed-route buses were past their useful life¹. Capital facilities and equipment are fundamental to system operations and in many ways represent the agency "face" because the buses are what the public most often observes. Capital facilities and equipment are also among the most expensive parts of a system. Capital and vehicle replacement plans will be developed as part of the Strategic and Financial Sustainability Plan to enhance the long-term sustainability of vehicle purchases and capital investment.

¹ "Useful life" is a definition developed by the Federal Transit Administration (FTA) that reflects the length of time (typically defined by age but also mileage) transit vehicles should be in service. FTA definitions vary by vehicle type and are based on vehicle testing.

Funding

Funding is the most significant challenge facing CHT over the short-, medium-, and long-term. As the cost of fuel, labor and insurance rise, however, the cost of operating transit service—even without an increase in service—will continue to increase. Without a change in revenue streams, the gap between projected revenues and expenditures will continue to widen (see Figure 1). Obtaining long-term funding sustainability is a key goal of the Strategic and Financial Sustainability Plan, and funding is discussed in greater detail in Chapter 3 of this report.

Figure 1 CHT Projected Costs and Revenues (2013-2023)



Source: Nelson\Nygaard Consulting Associates



1 INTRODUCTION



CHT benefits from funding provided by three partners—UNC, the Town of Carrboro, and the Town of Chapel Hill.

Image from Nelson\Nygaard

1 INTRODUCTION

Chapel Hill Transit (CHT) is a very successful system carrying more riders than any other system in North Carolina, after Charlotte. Much of the system's growth has occurred over the past decade, after CHT decided to operate fare-free system in 2002. Transit has been—and continues to be—a cornerstone of the community by providing efficient travel for the University of North Carolina-Chapel Hill (UNC) and accommodating growth at both the UNC campus and the communities of Carrboro and Chapel Hill. The success at CHT also reflects a commitment to both transit and a multimodal transportation system by the agency partners, the Town of Carrboro, Town of Chapel Hill, and UNC.

Success, however, has not come without struggles. Consistent with experience nationally, traditional funding sources for transit agencies are stagnating while the cost to operate service increases. At the same time, the demand and need for transit is growing as transit services are increasingly viewed as important tools to stimulate economic development, protect the environment, and offer a viable travel option.

Beyond these national trends, CHT is at a turning point as an agency and service. What began as a shuttle service to and from the UNC campus has grown into a much bigger system, reflecting growth not only at UNC but also the broader region. However, as the system grows, investment in the agency's infrastructure has not kept pace: staffing levels increased only 37% while ridership increased more than 100% from 2002 to 2009, and a lack of investment in capital resources translates into more than 40% of the vehicle fleet being beyond its useful life. With these issues in mind, the purpose of the Strategic and Financial Sustainability Plan is twofold:

- Address CHT's short-term challenges associated with staffing and capital investments, and
- Articulate an agency vision for service development over the long term and craft a strategy that aligns longer-term system goals with a sustainable financial plan.

The State of the System Report is the first step in the strategic and financial planning process. The report intends to frame the issues, opportunities, and challenges facing CHT and serve as a starting point for future recommenda-

tions. The development of this report looked at a number of factors, including CHT's current operating environment, a market assessment, and plans for growth in the region. The final State of the System report includes information on trends associated with the regional transit network and a broader perspective of CHT's current funding environment.

A TALE OF TWO CITIES

In many ways, CHT represents a "tale of two cities." On the one hand, the Town of Chapel Hill and its partners have made great strides in developing a transit system that residents take pride in and helping the community meet its policy and livability goals. On the other hand, CHT is struggling with its own success. The agency responded to demand quickly, expanding external systems (routes and riders) without making corresponding investments in the internal systems that support service development. Most notably, a distinct lack of investment in staffing and capital infrastructure as well as other support systems, such as governance and funding models, marketing systems, and service design has negatively affected the system. A key part of the strategic and financial planning process will be to help CHT align these divergent systems.

Fixed-Route Bus Service



Route CPX approaches the Carrboro Center Park-and-Ride Lot.

Image from Nelson\Nygaard

CHT operates fixed-route bus service seven days a week, but the system is heavily oriented towards weekday service. In 2014, 29 routes operate on weekdays, eight operate on Saturdays, and two operate on Sundays. Both of the Sunday routes are campus circulator services.

CHT bus routes are heavily oriented towards the UNC campus and downtown Chapel Hill, with nearly every route providing service on or near campus. In turn, approximately 60% to 70% of all passenger trips begin or end at UNC.

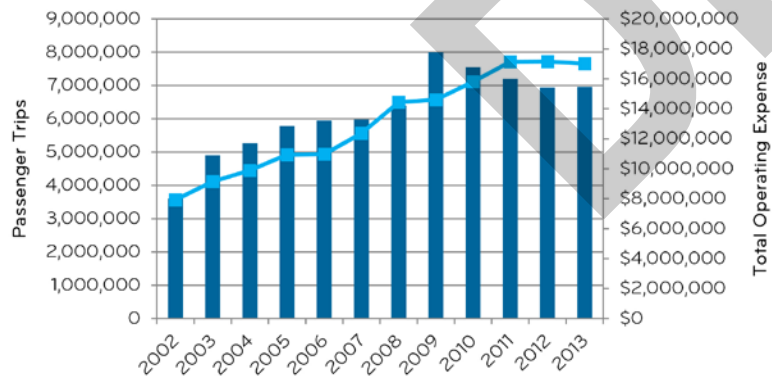
Several routes are specifically designed to provide circulation at UNC or bring students and employees to and from campus—some with very frequent service during peak periods. According to a passenger survey conducted in 2012, 39% of riders are students, and 36% of all trips are for college purposes—not including the faculty and staff traveling on CHT to get to campus.

Trends in Ridership, Service Hours, and Productivity

As discussed, CHT ridership has grown significantly over the past 10 years. Between 2002 and 2009, ridership more than doubled, growing from 3.5 million riders to 7.9 million riders over the eight-year period (see Figure 2). From 2002 to 2012, investment in service hours increased by 30% (from 121,000 annual revenue vehicle hours to 158,323) and investment in service operations more than doubled (from \$6.9 million to \$14.6 million)¹. By 2012—partially due to service cuts implemented in 2010—ridership decreased by 13% from its 2009 peak. Ridership and costs remained relatively steady in 2013. Future analysis conducted as part of the Strategic and Financial Sustainability Plan will make recommendations about service levels with the goal of enhancing the sustainability of CHT’s services.

¹ These numbers are for fixed-route service only (National Transit Database, 2002 and 2012).

Figure 2 Chapel Hill Transit: Total Passenger Trips and Operating Expense (2002-2013)*



* Figure 2 includes both fixed-route and demand response data. Source: Nelson\Nygaard adapted from National Transit Database

Park-and-Ride Lot Service

Town of Chapel Hill Park-and-Ride Lot Fees

There are currently 1,238 park-and-ride spaces in Chapel Hill and Carrboro that are open to the public. The following fees were implemented in 2013 and are effective at Carrboro Plaza, Eubanks, Southern Village, and Jones Ferry:

- Daily rate: \$2
- Monthly rate: \$21
- Annual rate: \$250

Parking on the UNC campus is restricted; some 50,000 people are on campus every day (faculty, staff, students, and visitors, plus hospital staff) but only roughly 15,000 parking spaces². Thus, the CHT’s bus service evolved largely out of a need to ensure people could get to the UNC campus. Initial service primarily consisted of a series of shuttles running between park-and-ride lots and campus. To a large extent, the network retains much of that original structure, with all but three of the existing weekday routes serving at least one park-and-ride lot.

Express park-and-ride lot routes represent 21% of CHT’s overall transit service hours and carry nearly 20,000 riders per day, or about two-thirds of the overall ridership.

The park-and-ride lot network consists of 11 facilities, five of which are owned by the Town of Chapel Hill and open to the public, and six of which are owned and managed by UNC and open to UNC affiliates³ only. Most park-and-ride lots are within a five-mile radius of the center of campus, which minimizes the amount of time people spend on the bus. In general, the park-and-ride lot system has been a very successful tool in keeping UNC accessible and managing the need for on-campus parking facilities. The lots have historically been very well-used and operating short distances from park and ride lots to campus helps CHT operate cost-effective service.

However, CHT’s focus on serving park-and-ride lots in the long term is in question. The broader Research Triangle Region, through new taxing authorities, is in the process of creating a regional transit system with long-term plans for fixed-guideway (light rail) transit service as well as expanded regional bus networks. Triangle Transit Authority (TTA) (see also Chapter 2) is already expanding the regional bus network, including park-and-ride lot service that allows riders to board the bus closer to home and spend more time on the bus but less time driving. This model is increasingly attractive to commuters—the

² University of North Carolina at Chapel Hill, 2013

³ Those parking in a UNC-owned park-and-ride lot must display a tag or sticker in their windshield.



Route CPX approaches the Carrboro Center Park-and-Ride Lot.

Image from Nelson\Nygaard

trip is less expensive, and amenities such as Wi-Fi make time on the bus more productive. At the same time, decisions at CHT to charge parking fees at the Chapel Hill park-and-ride lots help make regional buses more attractive.

Organizational Structure



A passenger exits Route FCX at the Friday Center Park-and-Ride Lot.

Image from Nelson\Nygaard

As CHT doubled the amount of service it provided, many parts of the organization and organizational structure did not keep pace. Inadequate staffing levels are due to a number of factors, including limited funding, working within the constraints of being a department in the Town of Chapel Hill, and failing to update practices that worked for a smaller system but are unsuitable for CHT's current size.

From an organizational standpoint, CHT's current structure is flat, with limited hierarchy for reporting requirements and

supervision. Consequently, some positions (including the Transit Director) have a

significant level of responsibility, requiring them to be both a policymaker and a day-to-day operations manager. In a smaller system, such a level of responsibility is appropriate, but CHT has grown well beyond a small system. Management staff efforts are best spent supervising and monitoring rather than participating in daily activity. Improving CHT's internal organization will help make the agency more effective and better positioned to adapt to the current operating environment as well as emerging demands and needs. An organizational analysis conducted as part of the Strategic and Financial Sustainability Plan will provide recommendations about staffing levels and organizational structure at CHT.

Capital Planning: Replacing Old Vehicles

Capital facilities and equipment are fundamental to system operations and in many ways represent the agency "face" because the buses are what the public most often observes. Capital facilities and equipment are also among the most expensive parts of a system.

Ongoing funding challenges at the operating level combined with changes in federal funding programs have led to an under-investment in capital infrastructure. By the end of 2013, all 19 demand response vehicles and 42 of 99 fixed-route buses were past their useful life⁴. Consequently, there are days where it is difficult for CHT to put enough vehicles into service due to mechanical problems associated with operating an old fleet.

In the next 10 years, therefore, CHT will need to purchase 79 fixed-route vehicles. At an average cost of \$440,000 per full-sized bus and \$640,000 per articulated vehicle, the total fixed-route vehicle investment needed in the next 10 years is estimated at approximately \$40 million—an annual average of approximately \$4 million⁵. When including demand response and non-revenue vehicles, the total investment increases to \$45 million. Capital and vehicle replacement plans will be developed as part of the Strategic and Financial Sustainability Plan to enhance the long-term sustainability of vehicle purchases and capital investment.

⁴ "Useful life" is a definition developed by the Federal Transit Administration (FTA) that reflects the length of time (typically defined by age but also mileage) transit vehicles should be in service. FTA definitions vary by vehicle type and are based on vehicle testing.

⁵ This number includes annual cost increases associated with vehicle prices. Additionally, due to funding constraints, the conceptual fleet replacement plan assumes that the articulated vehicles currently in the fleet will be replaced with regular full-sized buses.



Passengers wait for the bus at the corner of Columbia Street & Franklin Street in Chapel Hill.

Image from Nelson\Nygaard

Funding

Funding is the most significant challenge facing CHT over the short-, medium-, and long-term. As the cost of fuel, labor and insurance rise, however, the cost of operating transit service—even without an increase in service—will continue to increase. Without a change in revenue streams, the gap between projected revenues and expenditures will continue to widen. Obtaining long-term funding sustainability is a key goal of the Strategic and Financial Sustainability Plan, and funding is discussed in greater detail in Chapter 3 of this report.

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Once the baseline challenges are addressed, the Strategic and Financial Sustainability Plan will focus on working with CHT staff, funders, and the broader community to articulate a vision for how transit can support community goals for a viable, multimodal future. Continued, sustainable, and innovative funding solutions will be an essential part of this strategy. The State of the System Report is only the beginning of the conversation about the challenges and opportunities for CHT. Framing issues related to regional transit investment and funding (see Chapter 2 and Chapter 3) are essential to developing solutions to some very real and impending challenges.



Approximately 60% to 70% of CHT's trips begin or end at UNC.

Image from Nelson\Nygaard



2 REGIONAL TRANSIT SERVICES



The Triangle Transit Authority provides service in downtown Chapel Hill.

Image from Nelson\Nygaard

2 REGIONAL TRANSIT SERVICES

REGIONAL GROWTH/ DEVELOPMENT IN THE TRIANGLE

The Research Triangle Region of North Carolina generally refers to the cities of Raleigh, Durham, and Chapel Hill, as well as Wake, Durham, and Orange counties. Chatham County is also sometimes considered part of the Triangle Region, but this analysis concentrates on Wake, Durham, and Orange counties.

The region is well-known nationally for its concentration of universities and colleges, medical centers, and the Research Triangle Park (RTP), one of the largest research and development centers in the U.S. In part due to the success of RTP, the Triangle Region has emerged on the national stage as one of the nation's most desirable places to live. This has fueled tremendous growth, such that the region's population has doubled in the past 12 years, growing from roughly 700,000 in 1990 to 1.4 million in 2012¹.

Development of the Triangle Region is somewhat unique as a metropolitan area because there is no clear urban center. While the City of Raleigh is by far the largest urbanized area in the region, its population is just over 420,000 residents out of a regional population of 1.4 million, accounting for less than one-third of all residents. In addition, the diversity of employment centers, including Raleigh (North Carolina state capital and home to North Carolina State University), Durham (RTP, Duke University, and North Carolina Central University) and Chapel Hill (UNC and UNC Hospitals) meaning the region is truly polycentric.

The region is expected to continue to expand, with both population and employment forecasted to increase significantly over the next several decades. While growth in Carrboro, Chapel Hill and the University of North Carolina is not expected to be as rapid or significant as the region overall, changes in the region have and undoubtedly will continue to have an impact on the role CHT plays in transit service delivery. In the future, CHT will need to achieve sustainability internally while also growing into a player in the larger region. The Strategic and Financial Sustainability Plan will investigate methods to better integrate CHT with regional services being implemented in the Research Triangle.

¹ According to the U.S. Census Bureau.



The Triangle Transit Authority is providing an increasing amount of service within Chapel Hill and Carrboro.

Image from Nelson\Nygaard

TRANSIT SERVICE DEVELOPMENT

Consistent with development patterns across the country, rapid population and employment growth in the Research Triangle area has led to increased demand for travel. Congestion on regional highway and roadway networks is significant, and despite plans for more roadway development, regional transportation plans suggest demand will outstrip capacity even with the proposed investments. Thus, as a part of a strategy to diversify travel opportunities, the region developed an ambitious plan for new and expanded regional public transportation services.

Historically, the state of North Carolina has provided funding for public transit at a county level. There are a variety of reasons for this, including the development of funding programs and transportation policies when North Carolina had fewer, smaller, and more discreet urbanized areas. Additionally, when the state had more rural areas, public transportation systems were more focused on developing community transportation services that coordinated service across

funding programs, including (and especially) social and human service programs. As a result, in areas like the Triangle region, there are several small-to medium-sized transit systems that are designed to serve unique and specific markets. Not counting CHT, there are six transit agencies operating in Wake, Durham, and Orange Counties² (see also Figure 3):

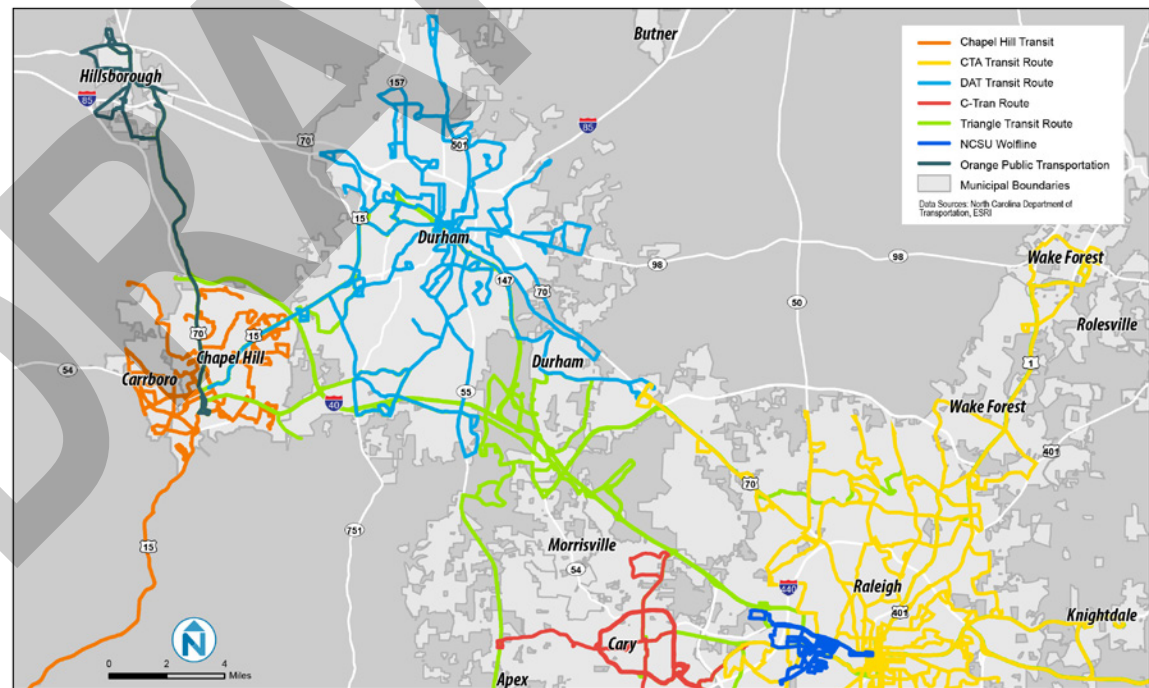
- **Triangle Transit Authority (TTA)** – the only regional transit operator, providing service to Raleigh, Durham, Chapel Hill, RDU Airport, Cary, Apex, Hillsborough, and Wake Forest. TTA also connects with several of the other regional service providers including CHT and also Durham Area Transit Authority and Capital Area Transit in Raleigh.
- **Durham Area Transit Authority (DATA)** – operates fixed-route and demand response service throughout the City of Durham.
- **Capital Area Transit (CAT)** – provides fixed-route and demand response service throughout the City of Raleigh.
- **Wolfline Transit** – provides bus service on and around the campus of North Carolina State University (NC State) in Raleigh.
- **Orange County Public Transportation** – operates as the Orange Bus and provides a variety of public transportation services to the citizens of rural Orange County.
- **Chatham Transit Network** – offers public transportation around Chatham County, in the towns of Siler City and Pittsboro, to Chapel Hill and back, and to medical appointments.

In addition to the local public transit services, the region also has an Amtrak service, with stations in Durham, Cary, and Raleigh as well as intercity bus service operated by MegaBus and Greyhound. In addition, a regional ridesharing/commuter organization, GoTriangle, provides residents with a one-stop information source about travel choices, including transit, rideshare, biking and walking, and telecommuting.

This network of service means that historically, transit services have been both funded and

oriented locally. Consequently, there have been significantly fewer services devoted to transporting people between communities. Prior to the recent tax initiative described later in this chapter, TTA had very limited funding and operated only a handful of routes. The end result is a mismatch between regional travel patterns and transit service development. While travel and economic patterns are regionally-oriented, most transit service is local. This mismatch made it difficult for transit to be viable for anything other than local trips.

Figure 3 Regional Transit Service



Source: Nelson\Nygaard

² Not including transit services on the Duke University campus, which are deemed private.

EMERGENCE OF REGIONAL TRANSIT

Funding, Organization and Development

In light of rapid growth and forecasts for continued growth, the region spent much of the past decade developing a regional transit vision and investment plan, which is intended to guide public transportation investment and service development. The planning effort was led by a group of regional stakeholders who studied, evaluated, and considered regional needs, expectations, and appetite for a truly regional public transportation network. The outcome of this effort is designed to shape future growth and land uses, reduce congestion, and create a regional public transportation network.

One of the first steps taken by the stakeholders was working with the North Carolina General Assembly to grant authority to Durham, Orange, and Wake County to raise funds for public transportation services. The authority was provided through the Congestion Relief and Intermodal Transportation 21st Century Fund, which gave the three counties authority to raise funds through one of four revenue sources. Each funding source has different requirements for how it can be initiated. The four revenue sources are as follows:

- A half-cent sales tax activated with voter approval of a sales tax referendum.
- "Inflation Adjustment" of a regional vehicle registration fee (from \$5 to \$8), with all proceeds allocated to transit service development and activated by the County Board of Commissioners.
- A County vehicle registration fee of up to \$7 activated by the County Board of Commissioners.
- A property tax levied on RTP to support public transportation projects could also be activated. Implementation of the tax must be approved by the RTP Owners and Tenants Association and the County Board of Commissioners.

As part of the regional transit strategy, the stakeholders charged TTA to work with the individual counties (Wake, Durham, and Orange) to develop a transit investment plan that outlines the proposed investments and explains how funds will be distributed equitably across individual counties and the region overall. Each County Board of Commissioners was charged with bringing the plan to county voters when and if they agree to support the project.



The Triangle Transit Authority provides service to UNC.

Image from Nelson\Nygaard

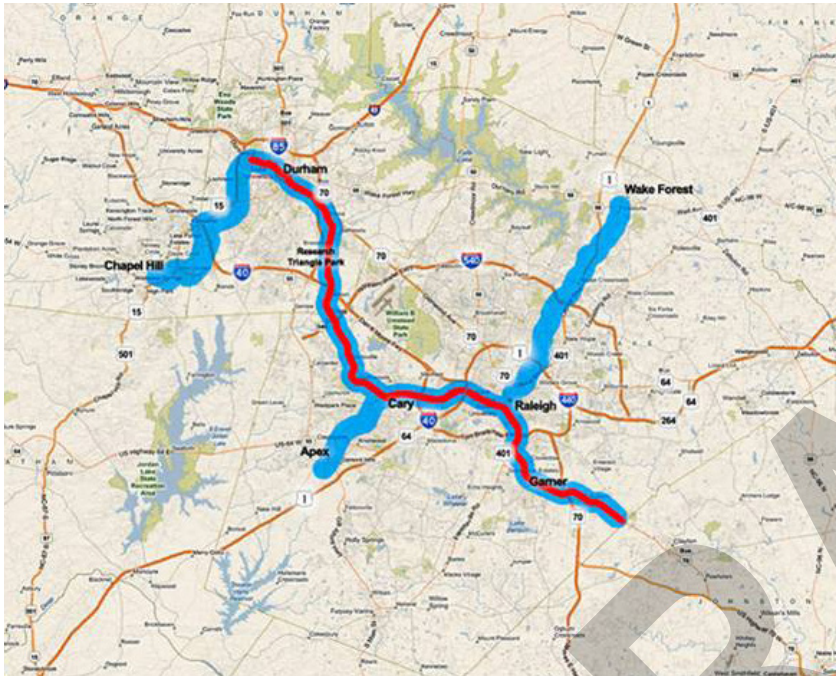
Durham County approved its plan in November 2011, and Orange County approved its plan a year later in November 2012. Both counties are currently collecting sales taxes and planning and developing new services, with several projects already implemented. Wake County, however, has not yet held a referendum on the sales tax.

Planned Transit Services

The regional transit plan is an ambitious program of transit investments. As discussed, not all of the funding is in place, especially because Wake County, which is the most populous county in the region, has not yet moved forward with funding. The overall strategy is based on a combination of the regional transit plan and other regional long-range transportation planning efforts. Transit investments include three main strategies:

- Expanded and enhanced local and regional bus service.
- Development of a regional rail service on the region's most heavily-traveled corridors.
- Local transit circulator systems to provide connections to and from the regional network.

Figure 4 Wake, Durham and Orange County Transit Plan – Proposed Regional Rail Corridors



Source: Capital Area Friends of Transit Regional Transit Vision

The most expensive component of the plan is the development of the rail network. The plan currently calls for 56 miles of rail, including a combination of light rail and commuter rail, depending on demand. Communities slated for rail service include Chapel Hill, Durham, RTP, Morrisville, Cary, Raleigh, Apex, Wake Forest, and Clayton (see Figure 4).

Investments in Orange County

The Bus and Rail Investment Plan for Orange County, as adopted in December 2012, lays out a plan for expanding and improving local and regional bus service as well as developing new regional transit infrastructure. Durham County, as mentioned, passed their referendum in November 2011; thus, projects affecting both counties along the western part of the Triangle Region are further along than in other locations. The investment plan calls for a series of bus service improvements, many of which are slated for the short term, and a series of capital improvements, which have a longer implementation timeline.

Bus Service Improvements

New projects include new local bus service within the county, expanded rural service in the northern and western part of the county, and new regional services operating between Durham and Orange counties. Specifically, in the first five years, the plan calls for an investment of 34,650 bus service hours, which will be allocated to:

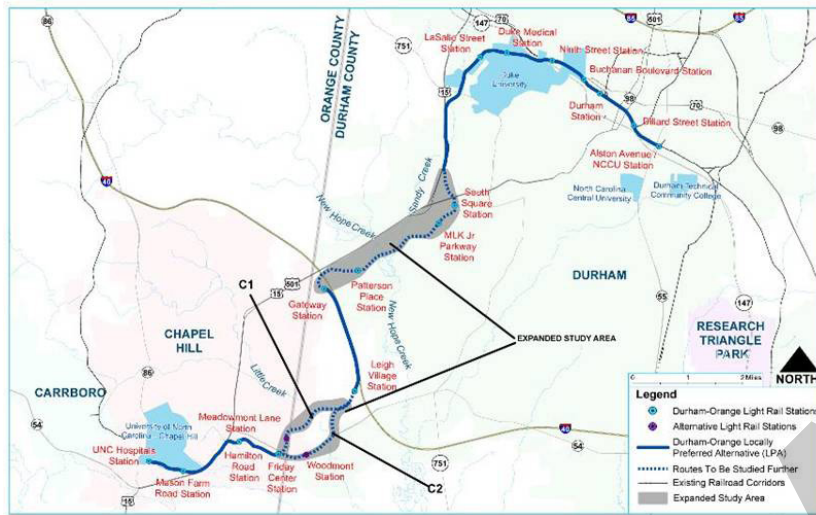
- New regional service connecting Carrboro, Chapel Hill, and Durham.
- Regional express service connecting Mebane, Hillsborough, and Durham.
- Peak period service expansion (increased frequency of existing services) on two TTA Routes (Route 420 and 800) and in the US 15/501 corridor (Franklin Street) and the NC 54 corridor (Raleigh Road).
- Off-peak service expansion, especially on weekend days and evenings. The proposal for the expanded services also calls for investment in TTA Routes 420 and 800, plus local service in Chapel Hill, Carrboro, and UNC and new Saturday service on the in-town Hillsborough route.
- Enhancements to the rural services operating in Orange County.



The Bus and Rail Investment Plan for Orange County contains a number of new service and capital improvements

Image from Nelson\Nygaard

Figure 5 Proposed Durham to Chapel Hill Light Rail Line



Source: Capital Area Friends of Transit Regional Transit Vision

In year six and until the planning horizon (2035), the plan calls for an additional 6,300 bus service hours to be added to the system, mostly in the form of increased frequency on existing routes and additional enhancements to rural services. The new tax revenues are expected to generate more than \$6.5 million³ per year.

Capital Investments

In addition to bus service improvements, the Bus and Rail Investment Plan also calls for new investments in transit infrastructure, including park-and-ride lots, shelters, real-time passenger information, and pedestrian infrastructure around bus stops. It also includes development of an Amtrak Station in Hillsborough.

The next largest major project in the plan is improvements to Martin Luther King Jr. Blvd. to develop bus right-of-way along the corridor as well as other BRT treatments. The plan sets aside \$22 million to build the lanes, but no new operating funds are associated with this project, based on the assumption that CHT already provides high-frequency service in the corridor.

³ Estimated

The lion's share of the investment dollars, however, would be used to support to a proposed 17-mile light rail system extending from the UNC Hospitals in Chapel Hill to North Carolina Central University (NCCU) on Alston Avenue in East Durham (see Figure 5). The plan includes development of 17 stations, including a station at Meadowmont, Mason Farm, and UNC in Chapel Hill.

Implications for Chapel Hill Transit

The implications of the regional transit strategy for CHT are unfolding. On one hand, a broad commitment to strengthening and improving transit services will significantly benefit the region overall. The regional strategy will support many goals articulated in each of CHT's partners' plans: development of regional transit services will make it easier and more efficient for people to travel into Chapel Hill and Carrboro. By increasing travel options, new services will help sustain proposed growth at UNC as well as reduce local and regional traffic and congestion, thereby significantly contributing to the overall quality of life.

In terms of transit service operations, however, the implications are potentially more significant, and at the current time, less clear. With a few exceptions, most notably the Hillsborough and Pittsboro Express routes, CHT does not serve communities outside of the Towns of Chapel Hill and Carrboro. As the region develops "trunk" services such as BRT, light rail, and regional bus routes, there may be more need for local distribution services. This is especially true for Carrboro, which is not expected to be on either of the rail lines and not as likely to benefit from proposed trunk services.

Regional transit services are also likely to impact CHT's current service model, which is built around park-and-ride service. The existing system uses park-and-ride lots to support commuting patterns where people drive to Chapel Hill or Carrboro, park their vehicles on the outskirts of town, and use CHT services to shuttle to and from the UNC campus and downtown Chapel Hill or Carrboro. The proposed transit investment would alter this model by encouraging riders to board a bus (or train) earlier in their commute trip and closer to their home. This means they would spend more time on transit. For most people, commutes would be less expensive, more efficient, and more environmentally sound.

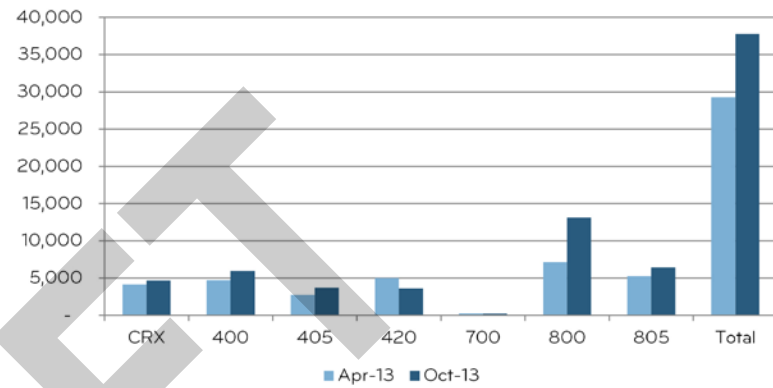
The impact on CHT could be less demand for their park-and-ride lot services, including potentially less demand at peak periods. CHT's existing services may need restructuring to adapt to the new network. This could help the system by reducing the demand for peak period services, but it may also mean that CHT

would continue to provide some park-and-ride services with lower service levels or lower levels of productivity.

Indeed, recent investments in TTA show that some commuters have already started to make this transition. Transit tax revenues have already been invested into two TTA routes traveling into downtown Chapel Hill and UNC: Route 405 (Durham to Chapel Hill) and Route 800 (Chapel Hill Southpoint RTC). Both of these routes travel on key corridors in Chapel Hill, Route 800 travels along Raleigh Road, and Route 405 travels along Franklin Street. Furthermore, total monthly GoPass usage for UNC commuters increased by more than 27% from April to October 2013, including notable increases on Route 400, 405, 800, and 805 (see Figure 6). To date, CHT has not coordinated service with TTA, and during peak periods, corridors can be congested with both services. There are opportunities to better coordinate and integrate service on these corridors, especially if additional investments are planned. Service coordination requires consideration of a variety of issues, most notably fares—riders without a regional pass are reluctant to pay TTA fares for a short trip along Franklin or Raleigh Road, for example.

As the regional transit system begins to take shape, the opportunity in front of CHT is how to provide services that meet the needs and expectations of the local communities of Chapel Hill, Carrboro, and UNC and are also effectively integrated with the regional services.

Figure 6 Monthly UNC GoPass Usage by Route



Source: Nelson\Nygaard adapted from TTA

DRAFT



3 FUNDING



UNC provides approximately 38% of CHT's funding.

Image from Nelson\Nygaard

3 FUNDING

Transit funding in the United States is in a state of flux, due to the new practices, policies, and legislation at the federal level and also because of the lingering effects of the recent economic recession. At the federal level, important changes include the Moving Ahead for Progress in the 21st Century (MAP-21) transportation bill that was signed into law on July 6, 2012 and will guide surface transportation funding until September 30, 2014. While the new legislation updates federal policy and includes fairly substantial changes at the program level, the new laws are currently authorized for only a short time period, and agencies at every level are grappling with how the legislation will affect them and what the long-term impacts will be. In addition, some of the grant funds historically committed to and benefitting transit agencies, most notably congressional earmarks and ARRA, are no longer available. Uncertainty in federal policy is exacerbated by significant federal budget challenges, including prolonged under investment in the Highway Trust Fund.

Challenges at the federal level also affect state and local governments, which rely on federal funds for many of their programs and services. Like the federal government, state and local governments are also still recovering from the economic recession and thus are challenged by lower receipts from state and local taxing programs and reduced support from the federal government. Like transit agencies, state transportation departments are also trying to figure out how to leverage opportunities in MAP-21 with limited guidance and rule-making.

Consequently, there is less money overall available to support transit services and more uncertainty about future resources. At the same time, riders and local communities are placing more demands on transit operators, who are responsible for managing a business with cost inputs (hourly wages, fuel, and insurance) that increase annually and are largely out of their control. For CHT, successfully navigating this somewhat precarious environment involves building on successes, articulating needs, identifying stable funding resources, and capitalizing on opportunities as they arise. Obtaining long-term funding sustainability is a key strategy for the future success of CHT.

EXPENSES AND REVENUES

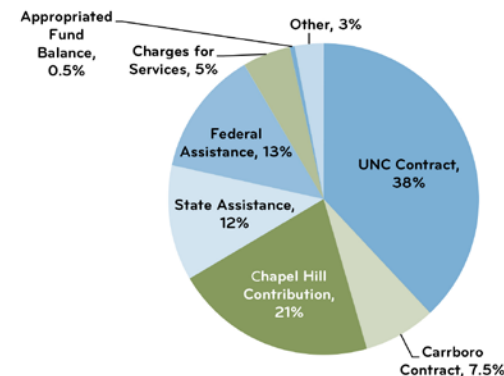
In FY14, CHT's adopted operating budget is an estimated \$19.8 million. The budget is used primarily to:

- Operate transit service, including both fixed-route and demand response service (69%).
- Maintain agency vehicles and resources (buildings) (23%).
- Manage and run the agency (administration) (6%).

The remaining 2% is spent on a variety of things, including special event transportation, advertisements, and miscellaneous projects.

In terms of revenues, transit systems across the United States are primarily funded through a combination of federal and state grant funds as well as local sources. Transit agencies also typically raise revenues through fares, partnerships with institutions, fee-for service contracts, and advertisements. CHT is somewhat unusual in that while it depends on federal and state funds for operations, contracts with Carrboro and UNC, as well as funding contributions from the Town of Chapel Hill account for 66.5% of the system's total operating revenue, or roughly \$13.1 million. This compares with federal and state funds, which account for approximately 13% and 12% of the agency revenues, respectively (see Figure 7). Contract revenues also help support the community's decision to operate fare free.

Figure 7 CHT Funding Sources (FY14)



Source: Nelson\Nygaard adapted from Town of Chapel Hill FY 2014 Adopted Budget



Revenues from the Town of Carrboro were approximately \$1.2 million in FY13.

Image from Nelson\Nygaard

In addition to operating revenues, CHT maintains a Transit Capital Fund that is intended to provide local matching funds for periodic capital outlays for the purchase of major capital equipment, such as buses. CHT has historically contributed to this fund as revenues allow and likewise has drawn from this fund to support capital investment as needed. However, CHT does not have a regular funding mechanism for the transit capital fund and consequently does not have a fund reserve to support future investments.

CHT's use of local resources—specifically contracts with partner agencies for funding—is a model with both advantages and disadvantages. Advantages include a reliance on CHT services as a key component of overall operations at UNC and Carrboro. For example, UNC has very limited parking and thus is reliant on alternative transportation systems to transport people to campus to work and study. Likewise, Chapel Hill and Carrboro—at both the municipal and residential level—have made clear commitments to public transportation as a strategy for growth management.

At the same time, the funding model has disadvantages: both Carrboro and UNC are subject to the same economic pressures as the Town of Chapel Hill. At the same time, transit demand typically remains steady or even increases during economic downturns. The Town of Carrboro funds CHT through general fund resources, and the Town of Chapel Hill raises transit funds through a property tax. UNC largely depends on general university revenues and student fees to raise its contribution for transit. Thus, when budgets and funding are constrained within Chapel Hill, they are almost certainly equally constrained in Carrboro and at UNC despite the continual demand for transit services.

Historical Perspective

Between FY07 and FY13, CHT's operating revenues and expenditures have increased by nearly 20%. This corresponds with an 8% increase in annual service hours and 17% increase in ridership¹. Annual revenues and expenditures over this period varied slightly, with the greatest year-to-year changes occurring in FY09 and FY13, with a growth of 9.5% and decline of 6%, respectively (see Figure 8). FY13's actual revenues and expenditures fell to below FY11 levels. The decreases in funding over this period reflect the lingering effects of the national recession, which reduced revenues available to all of CHT's partners during that period. The FY10 reduction in funding resulted in a corresponding cut in both service provided and ridership.

Historically, contributions from CHT's individual funding sources have been relatively stable both in terms of a percentage of the overall revenue stream and in absolute terms, with a handful of relatively significant anomalies. Starting in FY11, federal assistance began decreasing significantly, from nearly \$2.3 million in FY10 to \$1.9 million in FY11. Over a similar time period, state funding also decreased, albeit more slowly. Federal funding did rebound in FY13 (both FY12 and FY13 awards were received and recognized in FY13) but not to FY10 levels. This gap combined with the loss in state funds meant CHT had to both to draw down capital reserves and ask for increased participation from partners.

¹ According to data derived from NTD for 2007 to 2012, the most recently-available year.

Figure 8 CHT Transit Annual Expenditures and Revenues (2007-2013)

FY	2013	2012	2011	2010	2009	2008	2007
EXPENDITURES							
Admin & Non-Dept	\$1,121,702	\$1,861,700	\$1,184,828	\$849,734	\$2,079,786	\$617,936	\$835,638
Grant-Funded	518,491	673,847	587,376	1,711,758	611,194	-	-
Advertising	80,809	33,118	-	-	-	-	-
Recovery Act	-	-	-	-	-	-	-
Fixed Route	9,318,048	9,125,526	9,318,228	8,630,527	8,915,307	9,094,734	8,189,362
Demand Response	1,640,981	1,593,973	1,642,028	1,282,951	1,294,795	1,341,169	1,494,577
Special Events	245,303	244,568	223,066	291,085	252,053	224,981	213,637
Vehicle Maintenance	2,863,714	3,218,849	3,406,427	2,258,048	2,661,168	3,158,810	2,803,220
Building Maintenance	401,861	480,893	506,707	528,798	-	-	-
Total	\$16,190,909	\$17,232,474	\$16,868,660	\$15,552,901	\$15,814,303	\$14,437,630	\$13,536,434
REVENUES							
Charges for Services	\$835,007	\$830,046	\$661,983	\$716,199	\$570,144	\$463,503	\$537,895
Federal Assistance	3,918,387	-	1,900,000	2,308,997	1,900,000	1,440,308	1,115,308
Federal Ops Grants	316,174	446,621	-	977,983	500,000	-	-
State Assistance	2,768,076	3,419,853	3,671,170	3,570,322	3,319,737	3,545,519	3,432,644
Local Assistance	12,000	-	-	-	-	-	-
Recovery Act	-	-	-	-	-	-	-
Grants	-	-	408,285	-	-	-	-
TTA Fees	-	-	-	-	-	-	-
UNC Park & Ride	-	-	-	-	-	-	-
UNC Contract	7,084,096	5,930,168	5,930,168	5,828,502	6,120,571	5,699,526	5,290,044
Carrboro Contract	1,286,714	1,032,825	1,032,825	1,032,834	1,075,279	907,492	932,509
Advertising Revenue	102,865	44,611	-	-	-	-	-
Chapel Hill Revenues	3,447,401	3,412,361	3,519,774	3,546,047	3,019,231	3,067,026	2,879,792
Transfer from General Fund	-	-	-	-	-	-	-
Transfer from Transit Capital Grant	360,000	-	-	-	-	-	-
Appropriated Fund Balance	(3,939,811)	2,115,989	(255,545)	(2,427,983)	(690,659)	(685,744)	(651,758)
Total	\$16,190,909	\$17,232,474	\$16,868,660	\$15,552,901	\$15,814,303	\$14,437,630	\$13,536,434
Year-to-Year Change	(6.0%)	2.2%	8.5%	(1.7%)	9.5%	6.7%	-

Source: Nexus Consultants adapted from CHT



The Town of Chapel Hill contributed approximately \$3.4 million to CHT in FY13

Image from Nelson\Nygaard

FUTURE FUNDING

A critical challenge facing CHT is developing a sustainable funding strategy that supports the agency in stable operations and positions it to meet future community needs and expectations. Developing this strategy will be challenging and is a key component of the overall Strategic and Financial Sustainability Plan effort. As an overview, CHT's current (FY14) annual budget is roughly \$19.8 million. Without adding service or staff, CHT should expect the cost of providing service to increase **at a minimum** of 4% to 5% per year. These increases result from the following factors:

- The largest single input in transit operating costs is driver compensation. Compensation tends to increase annually, at a minimum in line with cost of living increases. Insurance costs, especially health care costs, are somewhat unstable except for the fact that the cost of providing insurance increases annually. This means CHT can expect wages to increase by at least 2% to 3% per year. Insurance costs tend to increase annually with periodic spikes; for purposes of this analysis, annual cost increases are estimated at 4% to 5%.
- Another primary driver of transit costs is the price of fuel. While fuel costs have stabilized recently, the overall trend is for increasing costs over time. Fuel may increase between 1% and 2% per year.

- Increases in vehicle costs also contribute to additional annual costs of providing service.

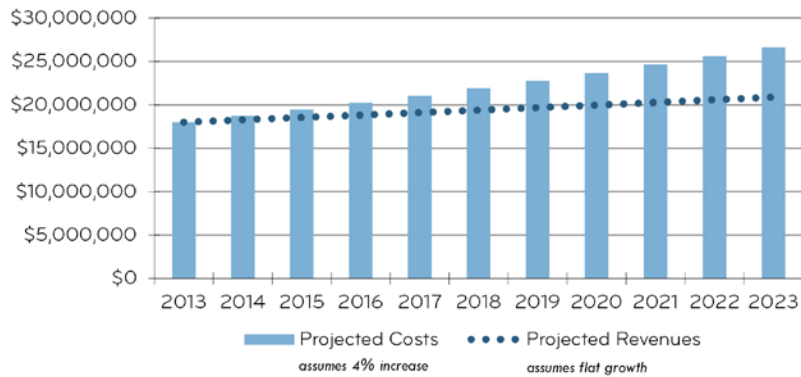
In addition, the agency is facing a dire need for new vehicles, with 100% of the demand response fleet and 42% of the fixed-route fleet aged beyond their useful lives. Seventy-five percent of the fleet will need to be replaced in the next 10 years.

CHT has been aggressive and successful in obtaining ad-hoc federal grants for capital equipment, primarily buses. However, these ad-hoc grant funding opportunities are waning and not a reliable source of revenue for future purchases. And while the Town of Chapel Hill has an annual "pay-as-you-go" capital program, this program currently has a net balance of less than \$100,000, and is a funding mechanism that, to this point, has not comeingled with transit funds.

Future Revenue Sources

Even without adding service moving forward, CHT will need a revenue stream that allows for increasing service costs not associated with service growth or expansion. Given that CHT's cost of service will continue to increase over time, without a change in revenue streams, the agency will experience an increasing gap between its revenue stream and projected expenditures (see Figure 9).

Figure 9 CHT Projected Costs and Revenues (2013-2023)



Source: Nelson\Nygaard Consulting Associates

This need is required for operating and capital funding. As discussed, existing funding sources and revenues to raise these funds are largely drawn from federal and state grants and partner funding. While some funds are raised through contracted services and advertisements, these revenues represent only a small portion of overall revenues (about 5%). Consequently, to date, the only strategy in place for future funding involves either containing costs or extracting additional resources from funding partners.

Federal and State Funds

While there is a fair amount of uncertainty regarding federal funding programs, MAP-21 suggests that transit operations will largely be funded at a level rate. For the purpose of this analysis, it is assumed that federal funds will continue to be available at their current level but without annual increases for normal, cost-of-doing-business increases.

Based on recent experience, state funds, on the other hand, appear to be less stable, and the assumption that future funding levels will be held constant is unlikely. The future of state funds for transit will be explored further, but for purposes of this analysis, the state funds are assumed to be held constant at the current levels.

Local Funding Sources

In November 2012, Orange County voters approved a half-cent sales tax designed to improve transit service throughout the county. The sales tax is expected to generate about \$5 million per year, with the revenue going toward new buses, improved bus service, an Amtrak station in Hillsborough, and a proposed light rail connection from UNC to downtown Durham. The majority of these funds are for regional service, but the tax does include a provision for an estimated \$471,000 to be transferred to CHT in FY14, with additional funding increases in subsequent years. The arrangement and format for transferring these funds is evolving, but the taxing legislation is fairly clear in establishing that while the vehicle registration fee can be used to support existing service, the sales tax revenues are intended to support future bus service in Chapel Hill.

Contract Revenues

Contract revenues from the Town of Carrboro and UNC were largely funded at a flat rate between FY09 and FY12. The contract revenues increased substantially between FY12 and FY13. Revenues from the Town of Chapel Hill did not increase last year, but were raised significantly between FY09 and FY10. The Town of Chapel Hill will increase its contribution to CHT in the adopted FY14 budget based on a one-cent increase in the tax rate, from 4.1 cents to 5.1 cents, which equates to \$729,000 in additional revenue for CHT.